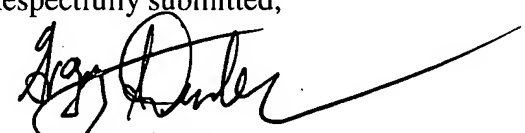
REMARKS

After entry of the amendment, claims 1, and 19-73 are pending in the application.

Support for the added claims is found throughout the specification. No issues of new matter should arise, and entry of the amendment is respectfully requested.

Respectfully submitted,



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Appendix 1 – Amended Claims and Newly Added Claims

1. (Twice Amended) A communication system for passing communication between a plurality of terminal devices, including telephones and computers, and a plurality of information services, including a telephone network and a data network, comprising:

a twisted pair wiring network coupled to the terminal devices including a plurality of separate twisted pair wiring networks, each separate twisted pair wiring network being for passing voice signals in a telephone voice frequency band between the telephone network and the one or more telephones coupled to said separate twisted pair wiring network; and

circuitry coupled to each of the separate twisted pair wiring networks for combining telephone and data signals including

a first data hub coupled to the data network and including a plurality of data ports each associated with a different one of the separate twisted pair wiring networks, wherein the first data hub includes circuitry for inhibiting transmission of data received from the data network and addressed to a computer coupled to one of the data ports from being transmitted on other of the data ports, and

for each of the data ports, circuitry coupled to the telephone network and to said data port, coupled to the separate twisted pair wiring network associated with said data port, and configured to combine on said separate twisted pair wiring network (a) telephone voice signals in the telephone voice frequency band passing between the telephone network and the one or more telephones on said separate network, and (b) high frequency signals in a high band of frequencies higher [that] than those of the telephone voice frequency band passing information between said data port and one or more of the computers coupled to said separate twisted pair wiring network,

wherein each separate twisted pair wiring network includes a two-conductor network and the circuitry coupled to the telephone network and to said data port further includes a first media adapter including circuitry for communicating with the first data hub over more than two conductors and for communicating with the one or more computers on said separate twisted pair wiring network over the two-conductor network.

33. (Amended). The system of claim 32 wherein the junction includes circuitry for coupling the branching paths in the telephone voice frequency band, including a common low frequency path coupled to at least one of the branching paths through a low-pass filter, and includes circuitry for coupling the branching paths in the high band of frequencies, including a circuitry for matching impedance coupled to at [lest] least one of the branching paths through a high-pass filter.

39. (Amended). The system of claim 1 wherein the terminal devices further include television receivers and associated remote control devices coupled to [a] the twisted pair wiring network, and wherein the circuitry for combining telephone and data signals further includes a video source, said video source including a receiver for accepting control information sent from the remote control device over the twisted pair wiring network in the high band of frequencies and a transmitter for providing a television signal to the television receiver over the twisted pair wiring network in the high band of frequencies in response to the control information.

50. (Amended). The device of claim 49 wherein the second connector includes an RJ-21 [jac] jack.

51. (NEW). The system of claim 1 wherein the first media adapter is configured to communicate with the first data hub using Ethernet signals over four conductors.

52. (NEW). The system of claim 51 further comprising a second media adapter coupled to the two-conductor network and to one of the computers, said second media adapter including circuitry for communicating with said computer using 10 megabit per second Ethernet signals over four conductors and for communicating with the first media adapter over the two-conductor network.

53. (NEW). The system of claim 52 where the first frequency band does not overlap the frequency band used by 10 megabit per second Ethernet signals.

54. (NEW). The system of claim 51 wherein the first media adapter includes circuitry coupled to the two-conductor network for transmitting a signal in a first frequency band to indicate that it is transmitting data onto the two-conductor network, whereby the signals in the first frequency band provide information for detecting data collisions on the two-conductor network.

55. (NEW). The system of claim 54 wherein the first frequency band does not overlap the telephone voice frequency band.

56. (NEW). The system of claim 55 where the first frequency band does not overlap the frequency band used by 10 megabit per second Ethernet signals.

57. (NEW). The system of claim 55 where the first frequency band does not overlap the frequency band used by 100 megabit per second Ethernet signals.

58. (NEW). The system of claim 52 wherein the first frequency band does not overlap the frequency band used by 100 megabit per second Ethernet signals.

59. (NEW). The system of claim 51, wherein:

said first media adapter transmits signals to said first data hub over a first twisted pair cable and receives signals from said first media hub over a second twisted pair cable, and

when operating in a first mode, said first media adapter receives any signals that are present on said two conductor network and transmits them to said first data hub over said first twisted pair cable, and

when operating in a second mode, any signals transmitted from said data hub over said second twisted pair cable are received by said first media adapter and transmitted onto said two conductor network, and

when operating in said first mode, said first media adapter will shift to said second mode if no signals are available for reception on the two-conductor network and said data hub begins to transmit signals over said second twisted pair cable.

60. (NEW). The system of claim 54, wherein:

said first media adapter transmits signals to said first data hub over a first twisted pair cable and receives signals from said first media hub over a second twisted pair cable, and

when operating in a first mode, said first media adapter receives any signals that are present on said two conductor network and transmits them to said first data hub over said first twisted pair cable, and

when operating in a second mode, any signals transmitted from said data hub over said second twisted pair cable are received by said first media adapter and transmitted onto said two conductor network, and

when operating in said first mode, said first media adapter will shift to said second mode if no signals are available for reception on the two-conductor network and said data hub begins to transmit signals over said second twisted pair cable.

61. (NEW). The system of claim 55, wherein:

said first media adapter transmits signals to said first data hub over a first twisted pair cable and receives signals from said first media hub over a second twisted pair cable, and

when operating in a first mode, said first media adapter receives any signals that are present on said two conductor network and transmits them to said first data hub over said first twisted pair cable, and

when operating in a second mode, any signals transmitted from said data hub over said second twisted pair cable are received by said first media adapter and transmitted onto said two conductor network, and

when operating in said first mode, said first media adapter will shift to said second mode if no signals are available for reception on the two-conductor network and said data hub begins to transmit signals over said second twisted pair cable.

62. (NEW). The system of claim 57, wherein:

said first media adapter transmits signals to said first data hub over a first twisted pair cable and receives signals from said first media hub over a second twisted pair cable, and

when operating in a first mode, said first media adapter receives any signals that are present on said two conductor network and transmits them to said first data hub over said first twisted pair cable, and

when operating in a second mode, any signals transmitted from said data hub over said second twisted pair cable are received by said first media adapter and transmitted onto said two conductor network, and

when operating in said first mode, said first media adapter will shift to said second mode if no signals are available for reception on the two-conductor network and said data hub begins to transmit signals over said second twisted pair cable.

63. (NEW). The system of claim 58, wherein:

said first media adapter transmits signals to said first data hub over a first twisted pair cable and receives signals from said first media hub over a second twisted pair cable, and

when operating in a first mode, said first media adapter receives any signals that are present on said two conductor network and transmits them to said first data hub over said first twisted pair cable, and

when operating in a second mode, any signals transmitted from said data hub over said second twisted pair cable are received by said first media adapter and transmitted onto said two conductor network, and

when operating in said first mode, said first media adapter will shift to said second mode if no signals are available for reception on the two-conductor network and said data hub begins to transmit signals over said second twisted pair cable.

64. (NEW). A junction for directing signals that flow along three or more conductive paths that connect to said junction, wherein

each conductive path consists of two twisted pair cables, and

signals flow towards said junction along one of the twisted pairs of each conductive path and signals flow away from said junction along the second twisted pair of the same conductive path, and

said junction includes a signal splitter connected to the twisted pair over which signals flow toward the junction and a signal combiner connected to the opposite twisted pair, and

part of the energy of the signals flowing towards each signal splitter is directed towards each of the signal combiners that are connected to different conductive paths, and

most of the signal energy arriving at each signal combiner is directed onto the twisted pair over which signals flow away from that combiner,

all of the signal splitters and signal combiners function without any external power.

65. (NEW). The system of claim 64 wherein each signal splitter directs an equal amount of energy to each of the signal combiners connected to a different conductive path.

66. (NEW). The system of claim 64 wherein the signals flowing to and from the junction are generated by devices that communicate using the half-duplex 10BaseT Ethernet standard.

67. (NEW). The system of claim 66, wherein at least one twisted pair cable on at least two of the conductive paths includes a hi-pass filter for blocking signals below the highest frequency used for ordinary telephone communications from flowing to or from said junction.

68. (NEW). The system of claim 64 wherein the signals flowing to and from the junction are generated by devices that communicate using the half-duplex 100BaseT Ethernet standard.

69. (NEW). The system of claim 68 wherein at least one twisted pair cable on at least two of the conductive paths includes a hi-pass filter for blocking signals below the highest frequency used for ordinary telephone communications from flowing to or from said junction.

70. (NEW). The system of claim 64, wherein at least one twisted pair cable on at least two of the conductive paths includes a hi-pass filter for blocking signals below the highest frequency used for ordinary telephone communications from flowing to or from said junction.

71. (NEW). The system of claim 70 wherein at least two of said high pass filters is connected between said junction and a point where a branch twisted pair cable which is connected to one of the two twisted pair cables on conductive path, and a low-pass filter is connected in series with each such branch twisted pair cable, wherein said low pass filter is configured to block signals at frequencies above the telephone voice band.

72. (NEW). The system of claim 71 wherein each branch twisted pair connects to a common junction, thereby allowing ordinary telephone signals to flow from any one branch twisted pair onto all of the branch twisted pairs.

73. (NEW). The system of claim 67 wherein at least two of said high pass filters is connected between said junction and a point where a branch twisted pair cable which is connected to one of the two twisted pair cables on conductive path, and a low-pass filter is connected in series with each such branch twisted pair cable, wherein said low pass filter is configured to block signals at frequencies above the telephone voice band.

74. (NEW). The system of claim 73 wherein each branch twisted pair connects to a common junction, thereby allowing ordinary telephone signals to flow from any one branch twisted pair onto all of the branch twisted pairs.

75. (NEW). The system of claim 69 wherein at least two of said high pass filters is connected between said junction and a point where a branch twisted pair cable which is connected to one of the two twisted pair cables on conductive path, and a low-pass filter is connected in series with each such branch twisted pair cable, wherein said low pass filter is configured to block signals at frequencies above the telephone voice band.

76. (NEW). The system of claim 75 wherein each branch twisted pair connects to a common junction, thereby allowing ordinary telephone signals to flow from any one branch twisted pair onto all of the branch twisted pairs.